

GIS REGISTRY INFORMATION

SITE NAME:	Red Key Supper Club			FID #	
BRRTS #:	03-41-001032			(if appropriate):	
COMMERCE # (if appropriate):	53154-4432-54				
CLOSURE DATE:	May 17, 2003				
STREET ADDRESS:	9454 S Howell Ave				
CITY:	Oak Creek				
SOURCE PROPERTY GPS COORDINATES (meters in WTM91 projection):	X =	690517	Y =	268756	
CONTAMINATED MEDIA:	Groundwater	<input type="checkbox"/>	Soil	<input type="checkbox"/>	Both <input checked="" type="checkbox"/>
OFF-SOURCE GW CONTAMINATION >ES:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	
• IF YES, STREET ADDRESS:					
• GPS COORDINATES (meters in WTM91 projection):	X =		Y =		
OFF-SOURCE SOIL CONTAMINATION >Generic or Site-Specific RCL (SSRCL):	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	
• IF YES, STREET ADDRESS 1:					
• GPS COORDINATES (meters in WTM91 projection):	X =		Y =		
CONTAMINATION IN RIGHT OF WAY:	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	
<u>DOCUMENTS NEEDED</u>					
Closure Letter, and any conditional closure letter issued					<input checked="" type="checkbox"/>
Copy of most recent deed, including legal description, for all affected properties					<input type="checkbox"/>
Certified survey map or relevant portion of the recorded plat map (if referenced in the legal description) for all affected properties					<input type="checkbox"/>
County Parcel ID number, if used for county, for all affected properties					<input type="checkbox"/>
Location Map which outlines all properties within contaminated site boundaries on USGS topographic map or plat map in sufficient detail to permit the parcels to be located easily (8.5x14" if paper copy). If groundwater standards are exceeded, the map must also include the location of all municipal and potable wells within 1200' of the site.					<input checked="" type="checkbox"/>
Detailed Site Map(s) for all affected properties , showing buildings, roads, property boundaries, contaminant sources, utility lines, monitoring wells and potable wells. (8.5x14", if paper copy) This map shall also show the location of all contaminated public streets; highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination exceeding ch. NR 140 ESs and soil contamination exceeding ch. NR 720 generic or SSRCLs.					<input checked="" type="checkbox"/>
Tables of Latest Groundwater Analytical Results (no shading or cross-hatching)					<input checked="" type="checkbox"/>
Tables of Latest Soil Analytical Results (no shading or cross-hatching)					<input checked="" type="checkbox"/>
Isoconcentration map(s), if required for site investigation (SI) (8.5x14" if paper copy). The isoconcentration map should have flow direction and extent of groundwater contamination defined. If not available, include the latest extent of contaminant plume map.					<input checked="" type="checkbox"/>
GW: Table of water level elevations, with sampling dates, and free product noted if present				SEE TEXT	<input checked="" type="checkbox"/>
GW: Latest groundwater flow direction/monitoring well location map (should be 2 maps if maximum variation in flow direction is greater than 20 degrees)				SEE TEXT	<input checked="" type="checkbox"/>
SOIL: Latest horizontal extent of contamination exceeding generic or SSRCLs, with one contour					<input checked="" type="checkbox"/>
Geologic cross-sections, if required for SI. (8.5x14" if paper copy)					<input type="checkbox"/>
RP certified statement that legal descriptions are complete and accurate					<input type="checkbox"/>
Copies of off-source notification letters (if applicable)					<input type="checkbox"/>
Letter informing ROW owner of residual contamination (if applicable)(public, highway or railroad ROW)					<input type="checkbox"/>
Copy of (soil or land use) deed restriction(s) or deed notice if any required as a condition of closure					<input type="checkbox"/>



ENVIRONMENTAL & REGULATORY SERVICES DIVISION
BUREAU OF PECFA
101 West Pleasant Street, Suite 100A
Milwaukee, Wisconsin 53212-3963
TDD #: (608) 264-8777
Fax #: (414) 220-5374
Jim Doyle, Governor
Cory L. Nettles, Secretary

May 17, 2003

Mr. Kenneth Wade
Wisconsin Department of Transportation
P.O. Box 798
Waukesha, WI 53187

RE: **Final Closure**

Commerce # 53154-4432-54 WDNr BRRTS # 03-41-001032
Red Key Supper Club, 9454 S. Howell Ave., Oak Creek

Petroleum contamination associated with a gasoline station formerly located on the Red Key Supper Club property and adjacent state highway right-of-way (ROW)

Dear Mr. Wade:

The Wisconsin Department of Commerce (Commerce) has received monitoring well abandonment documentation for MW-7 and MW-8, and notification that MW-9 is apparently now buried beneath a landscape berm on the west side of the supper club property. Proper monitoring well abandonment was the condition required for closure of the Wisconsin Department of Transportation (WDOT) portion of the site referenced above. Because MW-9 intercepts the groundwater table, it has the potential to become a direct conduit for transport of surface contamination to groundwater, especially if a contamination spill occurs in the nearby parking lot. Therefore, if MW-9 is located in the future, the well must be properly abandoned in accordance with applicable state statutes and rules. If the well does become a conduit of contamination to groundwater, then the WDOT may be held responsible for the investigation and remediation of contamination that migrates into the well.

In a letter dated March 21, 1996, the Wisconsin Department of Natural Resources "closed" (no further action required) the parcel that the Red Key Supper Club was responsible for investigating and remediating. With this letter, Commerce is closing the ROW portion of the contamination case. The site is now listed as "closed" on the Commerce database and will be included on the Wisconsin Department of Natural Resources (WDNR) Geographic Information System (GIS) Registry of Closed Remediation Sites to document residual contamination that remains within the ROW for State Highways 38 and 100 (S. Howell Ave. and Ryan Rd., respectively) at concentrations above state standards. It is in your best interest to keep all documentation related to the environmental activities that were conducted.

If residual contamination is encountered in the future, it must be managed in accordance with all applicable state and federal regulations. If it is determined that any remaining contamination poses a threat, the case may be reopened and further investigation or remediation may be required.

Mr. Kenneth Wade
Commerce # 53154-4432-54 WDNR BRRTS # 03-41-001032
Red Key Supper Club, 9454 S. Howell Ave., Oak Creek
May 17, 2004
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Thank you for your efforts to bring this case to closure. If you have any questions, please contact me in writing at the letterhead address or by telephone at (414) 220-5402.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen D. Mueller", with a long horizontal flourish extending to the right.

Stephen D. Mueller
Hydrogeologist
Site Review Section

cc: Mr. Tim Wood, STS Consultants
Case File



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
Gloria L. McCutcheon, District Director

Southeast District Annex
4041 N. Richards Street, Box 12436
Milwaukee, WI 53212-0436
TELEPHONE 414-229-0800
FAX 414-229-0810

March 21, 1996

File Ref: FID - 241584860
ERR - LUST

Steve Reuter
Advent Environmental
6100 W. Executive Drive Ste. E
Mequon, WI 53092

Dear Mr. Reuter,

RE: Red Key Supper Club/Department of Transportation Leaking
Underground Storage Tank Case
Ryan Road/South Howell Ave. Intersection
City of Oak Creek
Milwaukee County, Wisconsin

Thank you for submitting the Wisconsin Department of Transportation (WDOT) report titled: Ryan Rd./South Howell Ave. Intersection. Within the recommendations section of the report, you request case closure of the Red Key Supper Club site. In addition to your request for closure, you also propose additional monitoring of soil and groundwater on WDOT right of way.

Based on the investigative and remedial documentation provided to the Department, it appears that petroleum contamination on the Red Key Supper Club Parcel has been remediated in compliance with the requirements of chs. NR 700 to 724, Wis. Adm. Code. Therefore, the Department considers the Red Key/Kneusel property "closed," having determined that no further action is necessary. Please be aware that the Red Key Supper Club case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code, if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or the environment.

The Advent investigation report indicates that both soil and groundwater contamination still exists on property owned by the State Department of Transportation. The original agreement for corrective action between the WDOT and Mr. Kneusel allowed for the utilization of equipment purchased by Kneusel for remediating the WDOT right of way. Since the agreement was made in 1993, the WDNR codes and statutes have changed; these changes have resulted in Advent's amended proposal for corrective action as listed below:

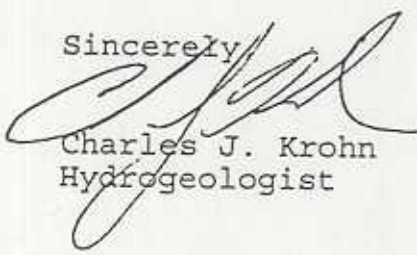
1. install additional groundwater monitoring wells,

2. Monitor groundwater impacts,
3. Evaluate contamination migration,
4. Evaluate biodegradation, and
5. eventually apply for closure under the new NR-140 "closure flexibility" provisions.

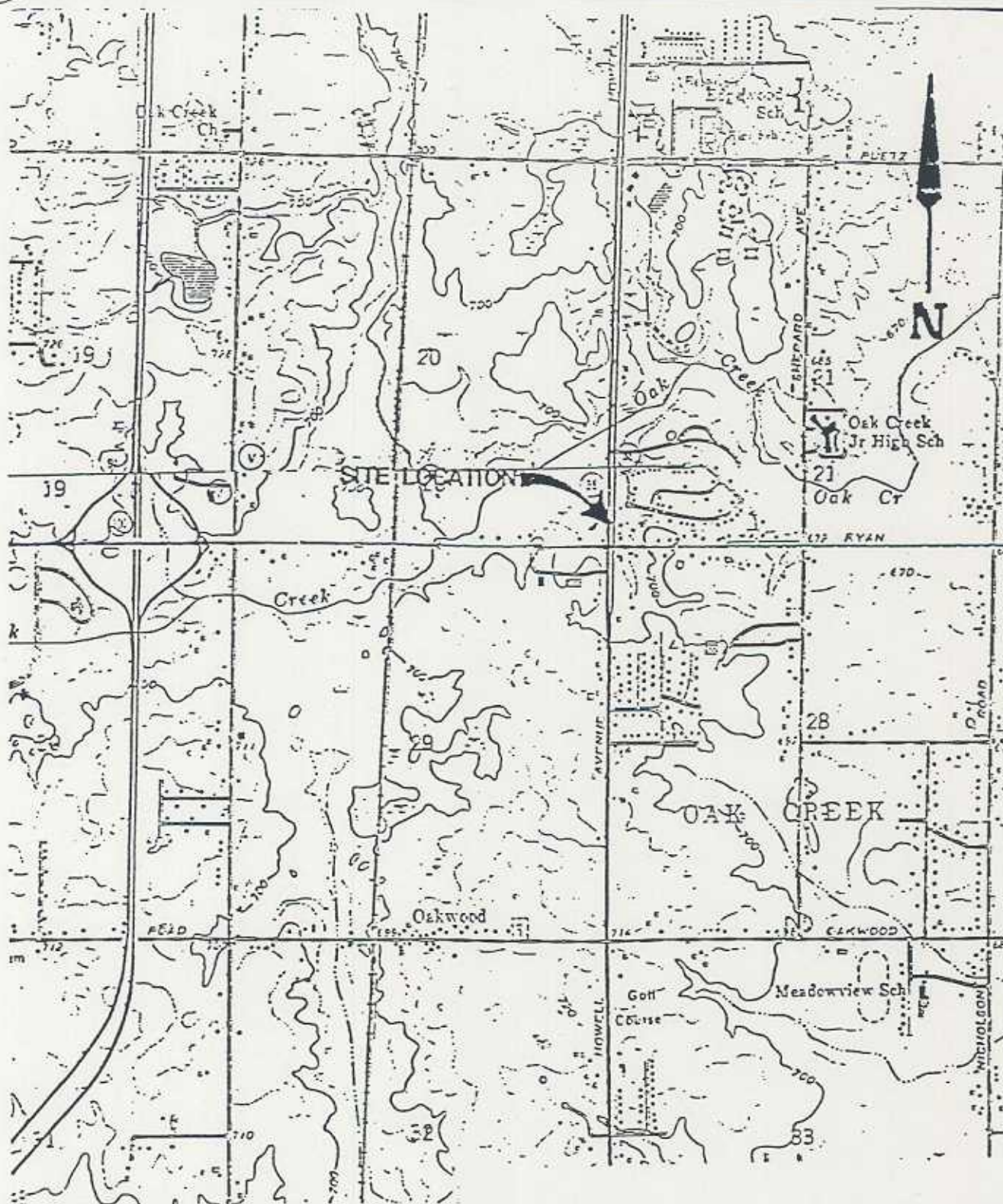
The Department hereby approves the proposal for additional monitoring on the DOT property. The additional work may provide information which would allow the WDOT property to be closed under new NR-140 "closure flexibility provisions" or provide information which would allow the site to be monitored instead of being actively remediated.

Please forward this letter to the heirs of the Kneusel estate, and thank them for their cooperation in the remediation of the Red Key Supper Club parcel.

Sincerely,



Charles J. Krohn
Hydrogeologist



NOTE:
 BASE MAP DEVELOPED FROM THE FRANKSVILLE, WISCONSIN
 7.5 MINUTE U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP.

SCALE (FEET): 0 2000

**FIGURE 1 SITE LOCATION MAP
 RYAN ROAD INTERSECTION
 OAK CREEK, WISCONSIN**



QUADRANGLE LOCATION
 SW1/4 SW1/4 SEC.21 T.5N., R.22E.

A D V E N T

ENVIRONMENTAL SERVICES, INC.
 DATE: 12/27/95
 DRAWING # 97082.01

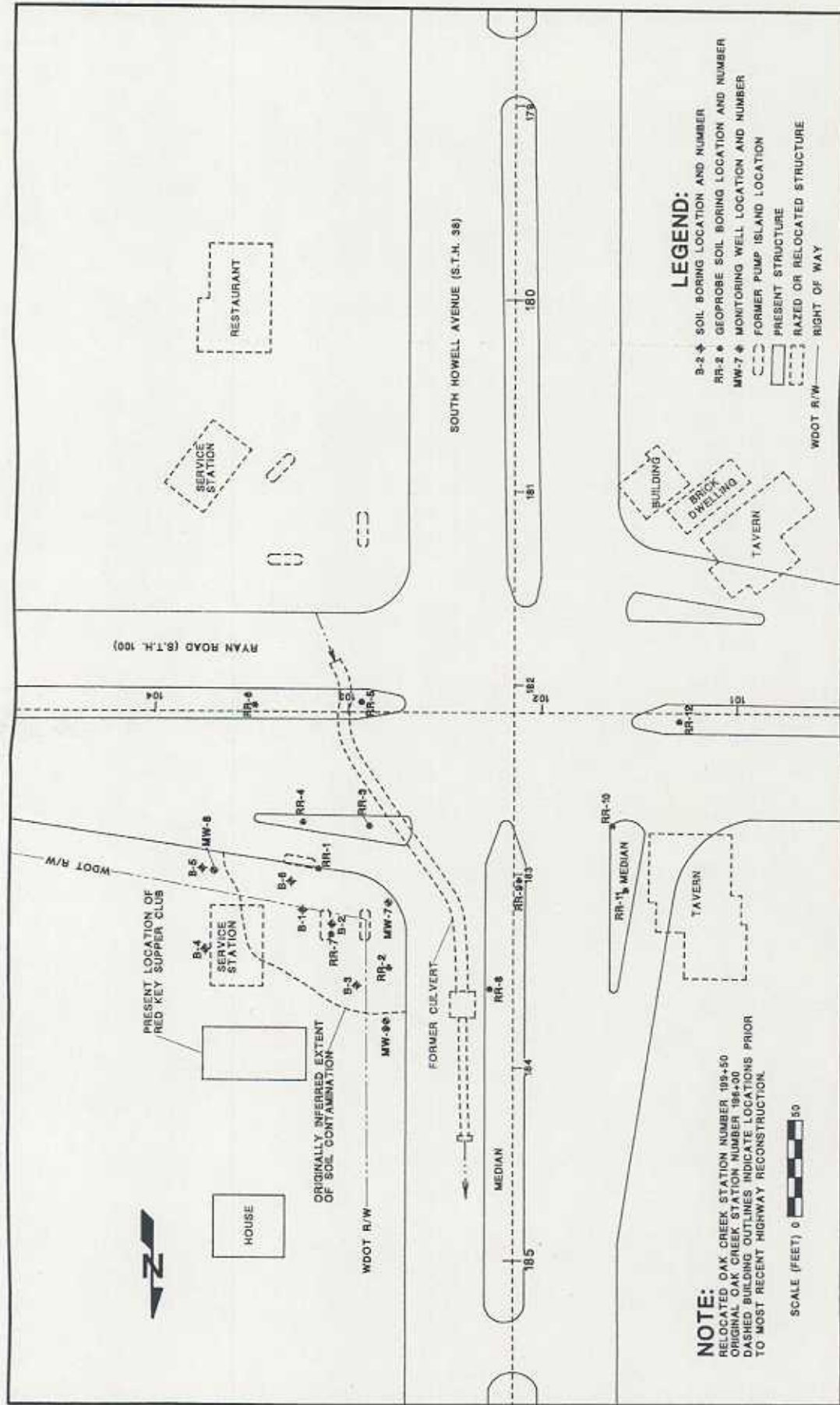


FIGURE 3 SOIL BORINGS
RYAN ROAD AND SOUTH HOWELL AVENUE
OAK CREEK, WISCONSIN

TABLE 3
ANALYTICAL RESULTS - GROUNDWATER
RYAN RD. / SOUTH HOWELL INTERSECTION

Sample	RR-2-W1	RR-3-W1	RR-5-W1	RR-6-W1	RR-7-W1	RR-8-W1	RR-9-W1	RR-10-W1	Groundwater Quality Standards
Boring	RR-2	RR-3	RR-5	RR-6	RR-7	RR-8	RR-9	RR-10	
Depth (feet)									
PID (ppm)	NR	NR	NR	NR	NR	NR	NR	NR	
ANALYTE									
DROs (ppm)	NS	NS	0.36	NS	NS	0.47	0.24	NS	
VOCs (ppb) ¹									
Benzene	41	5,000	2.4	ND	ND	ND	ND	ND	
Ethylbenzene	89	4,700	8	ND	ND	ND	ND	ND	5
Methyl-tert-butyl-ether	ND	ND	ND	ND	ND	ND	ND	ND	700
Toluene	2.4	550	1.1	ND	ND	ND	ND	ND	60
1,2,4-Trimethylbenzene	140	3,700	11	ND	ND	ND	ND	ND	1,000
1,3,5-Trimethylbenzene	22	880	2.7	ND	ND	ND	ND	ND	2,000
Xylenes (total)	92	12,000	30	ND	ND	ND	ND	ND	10,000
									1,000

NS Not Sampled
ND Not Detected
NR No Response



Indicates concentration exceeding the NR 140.10
Groundwater Quality Enforcement Standard

PRECISION ANALYTICAL LABORATORY

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12/20/93

CLIENT: Advent Environmental

Test	Result	Limit	Units	Analyzed	Extracted	BY	Method
Sample ID: MW-7				Lab ID: 9312193-01A	Collected: 12/10/93		
PVOC Water, (WDNR)							8020
Benzene	1700	40	OC ug/l	12/17/93		EMC	
Ethylbenzene	440	40	OC ug/l	12/17/93		EMC	
Methyl-t-butylether	51	40	OC ug/l	12/17/93		EMC	
Toluene	66	40	OC ug/l	12/17/93		EMC	
1,2,4-Trimethylbenzene	760	40	OC ug/l	12/17/93		EMC	
1,3,5-Trimethylbenzene	110	40	OC ug/l	12/17/93		EMC	
Total Xylenes	450	80	OC ug/l	12/17/93		EMC	

Sample ID: MW-8				Lab ID: 9312193-02A	Collected: 12/10/93		
VOC Water, (WDNR)							8020
Benzene	BQL	1.0	ug/l	12/15/93		EMC	
Ethylbenzene	BQL	1.0	ug/l	12/15/93		EMC	
Methyl-t-butylether	BQL	1.0	ug/l	12/15/93		EMC	
Toluene	BQL	1.0	ug/l	12/15/93		EMC	
1,2,4-Trimethylbenzene	BQL	1.0	ug/l	12/15/93		EMC	
1,3,5-Trimethylbenzene	BQL	1.0	ug/l	12/15/93		EMC	
Total Xylenes	BQL	2.0	ug/l	12/15/93		EMC	

Sample ID: MW-9				Lab ID: 9312193-03A	Collected: 12/10/93		
VOC Water, (WDNR)							8020
Benzene	BQL	1.0	ug/l	12/16/93		EMC	
Ethylbenzene	BQL	1.0	ug/l	12/16/93		EMC	
Methyl-t-butylether	BQL	1.0	ug/l	12/16/93		EMC	
Toluene	BQL	1.0	ug/l	12/16/93		EMC	
1,2,4-Trimethylbenzene	BQL	1.0	ug/l	12/16/93		EMC	
1,3,5-Trimethylbenzene	BQL	1.0	ug/l	12/16/93		EMC	
Total Xylenes	BQL	2.0	ug/l	12/16/93		EMC	

Sample ID: EFLU				Lab ID: 9312193-04A	Collected: 12/10/93		
PVOC Water, (WDNR)							8020
Benzene	BQL	1.0	ug/l	12/16/93		EMC	
Ethylbenzene	BQL	1.0	ug/l	12/16/93		EMC	
Methyl-t-butylether	BQL	1.0	ug/l	12/16/93		EMC	
Toluene	BQL	1.0	ug/l	12/16/93		EMC	
1,2,4-Trimethylbenzene	BQL	1.0	ug/l	12/16/93		EMC	
1,3,5-Trimethylbenzene	BQL	1.0	ug/l	12/16/93		EMC	
Total Xylenes	BQL	2.0	ug/l	12/16/93		EMC	

BQL - Below Quantification Limit NP - Not Present P - Present

TABLE 2 ANALYTICAL RESULTS - SOIL RYAN RD / SOUTH HOWELL INTERSECTION - OAK CREEK, WI.																
SAMPLE	Case Closeout Limits	RR-1-S1	R-R1-S2	R-R2-S1	RR-2-S2	RR-3-S1	RR-4-S1	RR-5-S1	RR-6-S1	RR-7-S1	RR-8-S1	RR-9-S1	RR-10-S1	RR-10-S2	RR-11-S1	RR-12-S1
Boring		RR-1	RR-1	RR-2	RR-2	RR-3	RR-4	RR-5	RR-6	RR-7	RR-8	RR-9	RR-10	RR-10	RR-11	RR-12
Depth (feet)		6-8	20-22	6-8	14-16	8-10	4-6	4-6	6-8	6-8	6-8	4-6	4-6	8-10	4-6	4-6
PID		NR	1	8	NR	220	280	2	1	NR	NR	NR	320	2	5	NR
GROs (ppm)	100	ND	ND	ND	ND	1,000	1,200	ND	ND	ND	ND	ND	540	ND	ND	ND
DROs (ppm)	100	ND	13	ND	ND	140	500	ND	ND	ND	ND	ND	460	ND	ND	ND
pVOCs (ppb) ¹																
Benzene	5.5	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	2,900	ND	ND	ND	ND	6,200	86,000	NA	4.4	ND	ND	ND	320	ND	ND	ND
Methyl-t-butyl-ether		ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1,500	ND	1.6	ND	ND	250	4,300	NA	ND	ND	ND	1.4	ND	1.2	ND	1.5
1,2,4 TMB		ND	ND	ND	ND	12,000	180,000	NA	4.8	ND	ND	ND	ND	ND	ND	ND
1,3,5 TMB		ND	ND	ND	ND	3,100	49,000	NA	3.8	ND	ND	ND	150	ND	ND	ND
Total Xylenes	4,100	ND	ND	ND	ND	17,800	303,000	NA	13.6	ND	ND	ND	276	ND	ND	ND
1,2 DCA	4.9	17	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND

1 Only VOCs detected are listed. For a complete list of VOCs analyzed, see Appendix

Shaded areas indicate concentrations above WDNR Case Closeout guidelines for petroleum-contaminated soils

ND Not Detected

* Indicates concentrations above the WDLHR 10 ppm remedial action guideline

TMB trimethylbenzene DCA dichloroethane

Site Geology

To further define site conditions, Advent investigated the site's geology. We reviewed topographic maps, soil and bedrock identification maps, and other sources of information on the site's physical characteristics and natural history.

The Ryan Rd./South Howell Intersection site is in the Eastern Ridges and Lowlands Physiographic Province of southeastern Wisconsin. Glaciation has been important in determining the site's surface geology and physiography. Surface deposits at the site are part of the terminal moraine complex deposited by the Wisconsin ice sheet during Woodfordian time. Terminal moraine deposits typically consist of mixtures of gravels, sands, silts, and clays.

According to the USDA "Soil Survey of Milwaukee and Waukesha Counties, Wisconsin (1971), surface soils at the site are part of the Morley silt loam association. The soils encountered in borings at the site generally consisted of silty clays grading downward to clayey silts overlying fine-to-medium grained sands.

Bedrock at the site is buried by glacial deposits to depths ranging from 80 to 165 feet below the surface. Locally, bedrock consists of Silurian dolomites and dolomitic limestones. Area well logs indicate that bedrock is separated from the contaminated zone by the Oak Creek formation beginning at a depth of approximately 16 to 30 feet and extending to bedrock. The clay member of the Oak Creek till is described as a fine-grained silty clay to clay containing 80-95% clay-size particles. It typically acts as an aquiclude between the shallow and deeper groundwater zones.

Regional topography at the site slopes at approximately three per cent toward Oak Creek which is approximately 1,600 feet to the north and northwest.

We encountered groundwater at depths of six to ten feet below ground surface (bgs) in groundwater monitoring wells and soil borings. Datumed water table elevations measured in groundwater monitoring wells at the adjacent Red Key Supper Club site suggest groundwater movement is to the northwest.

